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INTERMOUNTAIN FOREST AND RANGE EXPERIMENT STATION

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Salmon National Forest Annual Aerial Survey August 1957

By

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Entomologists

Prepared by

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SALMON NATIONAL FOREST
ANNUAL AERIAL SURVEY

August 1957

By

W. E. Cole - W. E. Mineau[1/]
Entomologists

INTRODUCTION

The annual aerial survey of the Salmon National Forest was conducted between August 15 and 19, 1957. Flights were made in the same manner as in the past to cover all forested areas by drainages. Where aerial observations indicated abnormal conditions further checks were made on the ground wherever possible. The purpose of the examination was to detect, locate, and evaluate all unusual forest insect activity. Such an aerial survey also aids in planning ground coverage by revealing the danger spots.

The spruce budworm remains the most prominent pest on the Salmon Forest. Some 139,805 acres were successfully sprayed for the control of the budworm in 1956. This area extended from Hughes Creek on the north, Ulysses and Indian Peaks, and south to Haystack Mountain; and from Panther Creek on the west to the main Salmon River on the east. In 1957 two separate areas, Stoddard Peak--25,300 acres--and Bernard Creek--30,310 acres--were successfully sprayed for budworm. These areas bordered the Big Creek infestation on the Payette National Forest.

A ground appraisal survey of the present spruce budworm situation has been conducted and will be reported separately.

In the past few years the Douglas-fir beetle has caused tremendous loss on the forest. There appeared to be a decrease in loss during 1957. Losses due to other bark beetles have remained static at a slightly higher than an endemic level.

The aerial survey was conducted at an altitude commensurate with safety and good observation. Observations were recorded on an electronic voice recorder and the areas of infestations outlined on a 1/4-inch scale map. The insect problems noted are described in the following section.

1/ Forestry Aid-research

RESULTS

Area A. This area lies on the east face of the Napoleon Hill ridge. One large area of some 6,200 acres and several spots totalling 1,600 acres of spider mite infestation were found in Area A. These infestations could be an outgrowth of the 1956 Spruce Budworm Control, since spraying could have reduced the natural control organisms of the spider mite. This pest is a serious threat to the forest and can kill trees within 1 to 2 years, or weaken them for subsequent bark beetle attacks.

Area B. This area encompasses all the drainages to the east of the North Fork Salmon River from Gibbons Pass to Carmen Creek.

Carmen Creek contains approximately 8,100 acres of heavy budworm damage. This infestation has been present for several years and has increased in severity in 1957.

There are approximately 6,400 acres of medium to heavy budworm damage with the Wagonhammer drainage below and west of Stein Mountain. The degree of infestation has increased from last year.

The area south and east of Gibbons post is relatively new. Approximately 10,400 acres are infested with budworm. The severity of defoliation ranges from light to heavy. The heaviest concentration occurs within the Smithy and Nez Perce drainages.

Alpine fir engravers are scattered throughout this latter area.

A spot infestation of pine butterfly was located between Smithy and Nez Perce Creeks.

Area C. This rather large area lies north of the main Salmon River and east of the North Fork of the Salmon River.

Heavy budworm damage was observed south of Gibbons Pass and west along the Montana border, while a light infestation exists in the creek bottoms within the 1956 sprayed area. Most of this area was sprayed in 1956 and whether the past damage is still prevalent enough to be confused as present damage, or whether a re-infestation is occurring from migrating moths could not be determined from the air. The ground checks obtained indicated that the damage seen could be from re-infestation. Approximately 84,100 acres fall within this area

An area of new infestation was found between Squaw Creek on the east to Owl Creek on the west, and from the Salmon River to the Montana border. The heaviest damage occurs along Squaw Creek and lessens to a light intensity in Owl Creek. Approximately 66,800 acres are infested.

In addition, two small spot infestations, 7,600 acres, of medium intensities were noted. One of about 4,000 acres lies south of Long Tom Mountain and the other of about 3,600 acres lies within West Horse Creek.

A small spot of about 1,100 acres containing spider mite damage was located just north of Ulysses Peak.

Douglas-fir bark beetle loss appears to be declining and only a few scattered fading alpine fir were located throughout the area.

Area D. The entire Panther Creek drainage and its tributaries comprise area D.

Again budworm is present in about two locations within this area, with little or no loss occurring due to bark beetles. The larger of these two areas contains approximately 42,300 acres of varying degrees of budworm damage. The most severe defoliation lies within Big Deer Creek, tapering to light defoliation around Gant Mountain and east across Panther Creek.

A smaller area of about 8,900 acres was located within Porphyry Creek. The damage ranges from medium to heavy in intensity.

Both of these infestations have originated within the last two years.

Area E. This area centers around the Middle Fork Peak within the Yellowjacket Mountains.

This area contains approximately 49,800 acres of budworm defoliation, ranging from light to heavy intensities. This area is bounded by the Middle Fork Salmon River on the west and extends eastward to include all of Yellowjacket Creek, south to Camas Creek and north to Wilson Creek, McEleny Mountain, and the Yellowjacket Ranger Station. The infestation is probably 1 to 2 years old and moved eastward from the Big Creek infestation on the Payette National Forest.

The heaviest damage occurs within Pole Creek, tapering to light defoliation within Jack and Wilson Creeks. Most of the east slopes contain a medium degree of damage.

SUMMARY

Approximately 284,400 acres of budworm damage were mapped by aerial observations on the Salmon National Forest. These areas are of recent origins, range from light to heavy intensity of damage, and are rather separated.

The area north of Ulysses Mountain is believed to be a re-infestation due to migrating budworm moths.

Spider mite infestations were observed on the east slopes of Napoleon Hill ridge and on Ulysses Mountain.

In general, losses occurring in 1957 due to bark beetles are at a very low, endemic level.

The Lemhi River drainage appeared exceptionally free of forest pests.

Table 1. Acreage and degree of severity of insect damage on the Salmon National Forest

Area	Insect	Acreage of defoliation			Total
		Light	Medium	Heavy	
A	Spider Mite	7,800	--	--	7,800
B	Budworm	--	--	24,900	24,900
C	Budworm	--	91,700	66,800	158,500
	Spider Mite	1,100	--	--	1,100
D	Budworm	--	8,900	42,300	51,200
E	Budworm	--	49,800	--	49,800
	Total Budworm	--	150,400	134,000	284,400
	Total Spider Mite	8,900	--	--	8,900

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

SALMON NATIONAL FOREST

IDAHO
BOISE MERIDIAN
1955*

SCALE

LEGEND

- BUDWORM INFESTED AREA
  - (L) LIGHT
  - (M) MEDIUM
  - (H) HEAVY
- SPIDER MITE INFESTED AREA
- (+) FIR ENGRAVER

FOREST SERVICE MAP CLASS E.

COMPILED AT REGIONAL OFFICE, OGDEN, UTAH, FROM U.S.G.S. FOREST SERVICE AND OTHER SURVEYS BY F. S. STAFF AND C. E. ERWIN.
DRAWN BY W. F. BYRON.
REVISED 1956 BY C. E. ERWIN.

* REPRINT OF 1949 EDITION

KEY MAP

IDAHO
SALMON
IDAHO FALLS
POCATELLO

POLYCONIC PROJECTION
NORTH AMERICAN DATUM